

The rejections shall be taken up in the order presented in the Official Action.

2-3. Claim 5 stands rejected under 35 U.S.C. §112, second paragraph.

Claim 5 has been amended to depend from claim 1.

4-5. Claims 1, 8-9 and 12 currently stand rejected for allegedly being obvious in view of the '163 Application in combination with the subject matter disclosed in DE 2 803 708 (hereinafter "the '708 Application").

As amended, claim 1 recites a method of applying syntactic foam insulation to a length of steel pipe. The method includes the steps of co-extruding an inner syntactic foam insulator and an outer thermoplastic protective cover around the length of steel pipe, and then solidifying the thermoplastic protective cover.

It is recognized that the '163 Application does not disclose the use of a thermoplastic material and air cooling (Official Action, pg. 4). It is then alleged that a skilled person at the time of the present invention would have replaced the thermosetting material disclosed in the '163 Application, with thermoplastic material as disclosed in the '708 Application (Official Action, pg. 4).

The '708 Application discloses producing a flexible, laminated insulating pipe (see Derwint Basic Abstract, 1<sup>st</sup> sentence). FIGs. 1 and 3 of the '708 Application illustrate the flexible, laminated insulating pipe 2 is wound around a cylindrical carrier 14. Hence, the insulated pipe disclosed in the '708 Application is of course flexible enough to be wrapped around the cylindrical carrier 14.

Claim 1, as amended, recites a method of applying syntactic foam insulation to length of *steel* pipe. A length of *steel* pipe is of course rigid, and not flexible enough to be wound around a circular carrier as illustrated in FIGs. 1 and 3 of the '708 Application. A person working in the field of the present invention (i.e., syntactic foam insulated pipelines) would not look to the field of the '708 Application, since it relates to flexible, insulated plastic tubing rather than insulated pipelines that include a rigid pipe (e.g., steel) coated with syntactic foam as set forth in claim 1. As a result, a skilled person in the field of insulated pipelines would not be motivated to combine the subject matter of the '163 Application, which employs a steel inner pipe, with the subject matter disclosed in the '708 Application, since the '708 Application merely discloses a flexible, laminated, insulated pipe.

*"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination."* In re Geiger, 2 U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987). *"Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, '[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.'"* In re Laskowski, 10 U.S.P.Q.2d 1397, 1398 (Fed. Cir. 1989), citing In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). In addition, *"[w]hen the incentive to combine the teachings of the references is not readily apparent, it is the duty of the examiner to explain why the combination of the reference teachings is proper."* Ex parte Stone, 2 U.S.P.Q.2d 1788, 1790 (Bd. App. & Int'f 1986) (emphasis added).

As noted above, it is fundamental that obviousness can not be established absent some teaching to combine the references, or a suggestion or incentive supporting the combination of

references. See In re Geiger, at 1278 (Fed. Cir. 1987). In the instant case the Official Action is lacking the necessary factual, non-conclusionary explanation why the combination of the '163 Application and the '708 Application is proper. Specifically, there is no proper suggestion of record in the Official Action regarding why these references are properly combinable. The Official Action recites that a skilled person would have combined the references since they both teach the use of a three layered insulated pipes, and the '708 Application teaches the use a thermoplastic outer layer. (Official Action, page 4, lines 12-17). However, there is simply no suggestion or reason of record why a skilled person would replace the thermosetting resin outer layer disclosed in the '163 Application with the thermoplastic outer layer of the '708 Application. The Official Action merely contends that it is conventionally known to use a thermoplastic outer layer. (Official Action, page 4, line 17). Hence, it is respectfully submitted that a prima facie case of obviousness has not been presented since there is no proper teaching, suggestion or incentive that would lead one of ordinary skill in the art to modify the subject matter disclosed in the '163 Application based upon the teaching of the '708 Application to create the claimed invention.

Claim 9 is patentable for at least all the same reasons as claim 1.

Claim 9 recites a method of forming an insulating product. The method includes the steps of:

“co-extruding an inner syntactic foam insulator and an outer thermoplastic protective cover; and  
solidifying said thermoplastic protective cover.” (cl. 9).

This preform may then be used at a later time to insulate a pipe. Specifically, new claim 19 dependent from claim 9, recites reheating the insulating product and insulating a pipe with the reheated insulated product. A fair and proper reading of both the '163 Application and the '708 Application indicates that neither application discloses such a re-heating step.

It is respectfully submitted that claim 18 is patentable for at least all the reasons as claim 1 set forth above.

6. Claims 1, 8-9 and 12 currently stand rejected for allegedly being obvious in view of the '163 Application in combination with the subject matter disclosed in JP 62-28222 (hereinafter "the '222 Application").

A skilled person would not be motivated to combine the subject matter disclosed in the '163 Application with the subject matter disclosed in the '222 Application. As set forth above, the field of the present invention is syntactic foam insulated pipelines. The '222 Application simply relates to a plastic pipe formed by a laminate of three materials. As shown in FIG. 1, materials 16-18 are extruded to form a pipe - they are not extruded around a pipe. In addition, the '222 Application does not relate to the field of syntactic foam insulated pipelines. The '222 Application simply relates to the field of plastic pipes that include *non-syntactic* foam within inner and outer thermoplastic layers. Therefore, it is respectfully submitted that a skilled person working in the field of syntactic foam insulated pipelines would not be motivated to combine the subject matter disclosed in the '163 Application and the '222 Application.


7. Claims 4-5 and 10 currently stand rejected for allegedly being obvious in view of the '163 Application in combination with the subject matter disclosed in of the '708 Application, further in combination with the subject matter disclosed in U.S. Patent 4,773,448 to Francis (hereinafter "Francis").

It is respectfully submitted that this rejection is now moot since claims 1 and 9 are patentable for at least the reasons set forth above.

For all the foregoing reasons, reconsideration and allowance of claims 1, 4, 5, 8-10, 12 and 18-20 is respectfully requested.

If a telephone interview could assist in the prosecution of this application, please call the undersigned attorney.

Respectfully submitted,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS**

Amend claims 1 and 5 as follows:

1. (Twice Amended) A method of applying syntactic foam insulation to a length of steel pipe,  
said method comprising the steps of:  
co-extruding an inner syntactic foam insulator and an outer thermoplastic protective  
cover around the length of steel pipe; and  
solidifying said thermoplastic protective cover to retain said syntactic foam insulator in  
a desired shape about the length of steel pipe.

5. (Twice Amended) The method of claim 2, wherein said step of solidifying comprises the  
step of passing the coated length of steel pipe through a liquid bath to cool said thermoplastic  
protective cover.

Please add claims 18-20 as follows:

--18. A method of applying syntactic foam insulation to a length of rigid metallic pipe, said  
method comprising the steps of:  
co-extruding an inner syntactic foam insulator and an outer thermoplastic protective  
cover around the length of rigid metallic pipe; and  
solidifying said thermoplastic protective cover to retain said syntactic foam insulator in  
a desired shape about the length of rigid metallic pipe.--

1 --19. The method of claim 9, further comprising:

2 following said step of solidifying, re-heating said insulating product to provide a re-  
3 heated insulating product.--

1  
1 --20. The method of claim 19, further comprising placing said re-heated insulating product  
2 into a mold for reshaping.--